

1 IN THE CLAIMS

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2 1 - 4. Canceled

3 5. Previously canceled

4 7 and 6. Canceled

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6 8. (Currently Amended) A method for recovering material from a tire portion containing a  
7 steel component, the method comprising the steps of:

8 (a) contacting a tire portion with a molten reactant metal including aluminum under  
9 conditions facilitating the dissolution of steel into the molten reactant metal, the  
10 contacting step being performed for a reaction period sufficient to allow  
11 substantially all organic materials originally included in the tire portion to react  
12 with the molten reactant metal but leaving the steel component substantially  
13 intact;

14 (b) containing the tire portion on a tire carrier ~~when~~ during the time that the tire  
15 portion is contacted by the molten reactant metal; and

16 (c) removing the tire carrier and unreacted solids retained on the tire carrier from the  
17 molten reactant metal immediately after the reaction period, the unreacted solids  
18 ~~comprising solids~~ including the steel component remaining after the tire portion  
19 has contacted the molten reactant metal for the reaction period.  
20

1 9. (Previously Added) The method of Claim 8 further comprising the step of maintaining the  
2 temperature of the molten reactant metal at a minimum of approximately 800 degrees  
3 Celsius during the reaction period.

4  
5 10. (Previously Added) The method of Claim 8 wherein the steps of contacting the tire  
6 portion with the molten reactant metal and containing the tire portion on the tire carrier  
7 include:

- 8 (a) lowering the tire portion into the molten reactant metal on the tire carrier; and  
9 (b) pressing the tire portion into the molten reactant metal with a tire contactor  
10 member extending across an area above the tire carrier.  
11

12 11. (Previously Added) The method of Claim 10 wherein the step of removing unreacted  
13 solids from the molten reactant metal includes:

- 14 (a) lifting the tire contactor member and the tire carrier from the molten reactant  
15 metal and allowing the molten reactant metal to drain from around the unreacted  
16 solids, tire contactor member, and tire carrier; and  
17 (b) cooling the tire carrier and unreacted solids located on the tire carrier.  
18

19 12. (Currently Amended) A method for recovering materials from a tire portion including  
20 ~~stainless~~ steel, the method comprising the steps of:

- 21 (a) immersing the tire portion in a molten reactant metal including aluminum ~~or an~~  
22 ~~aluminum alloy~~ for a reaction period sufficient to allow substantially all organic

1 materials originally included in the tire portion to react with the molten reactant  
2 metal, the molten reactant metal being held at a temperature at which stainless  
3 steel dissolves therein;

4 (b) containing the tire portion on a tire carrier when the tire portion is immersed in the  
5 molten reactant metal; and

6 (c) removing the tire carrier and unreacted solids retained on the tire carrier from the  
7 molten reactant metal upon completion of the reaction period, the unreacted solids  
8 including ~~solids~~ steel remaining after the tire portion has contacted the molten  
9 reactant metal for the reaction period.  
10

11 13. (Previously Added) The method of Claim 12 further comprising the step of maintaining  
12 the temperature of the molten reactant metal at a minimum of approximately 800 degrees  
13 Celsius during the reaction period.

14  
15 14. (Previously Added) The method of Claim 12 wherein the steps of immersing the tire  
16 portion in the molten reactant metal and containing the tire portion on the tire carrier  
17 include:

18 (a) lowering the tire portion into the molten reactant metal on the tire carrier; and

19 (b) pressing the tire portion into the molten reactant metal with a tire contactor  
20 member extending across an area above the tire carrier.  
21

1 15. (Previously Added) The method of Claim 12 wherein:

2 solids from the molten reactant metal includes:

3 (a) lifting the tire carrier from the molten reactant

4 reactant metal to drain from around the unreacted solids and tire carrier; and

5 (b) cooling the tire carrier and unreacted solids located on the tire carrier.

*see #12  
(c)  
including  
steel*

6  
7 16. (New) A method of recovering materials from a tire portion having a steel component, the  
8 method comprising the steps of:

9 (a) placing the tire portion in contact with a molten reactant metal while the molten

10 reactant metal is maintained at a minimum temperature of approximately 800

11 degrees Celsius so that organic components of the tire portion react with the

12 molten reactant metal to produce liberated carbon and so that any part of the steel

13 component that comes in contact with the molten reactant metal begins to dissolve

14 into the molten reactant metal;

15 (b) collecting the liberated carbon together with gasses escaping from the molten

16 reactant metal; and

17 (c) retrieving the remaining steel component of the tire portion from the molten

18 reactant metal.

19  
20 17. (New) The method of Claim 16 wherein the step of placing the tire portion in contact  
21 with the molten reactant metal includes loading the tire portion into a tire carrier,